IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:	)	
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Felix Henric Govert Ogg et al.	)	
	)	
Serial No.: 10/598,074	)	Group Art Unit: 3764
	)	
Filed: August 17, 2006	)	Examiner: Andrew M. Tecco
	)	
For: AUDIO INTERVAL TRAINING DEVICE	)	**Board of Patent Appeals and Interferences**
	)	
Confirmation No.: 9809	)	

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REPLY BRIEF UNDER 37 C.F.R. § 41.41

In response to the Examiner's Answer mailed on September 17, 2009, to the Appeal Brief filed June 23, 2009, and pursuant to 37 C.F.R. § 41.41, Appellants present this Reply Brief in the above-captioned application.

This is an appeal to the Board of Patent Appeals and Interferences from the Examiner's final rejection of claims 1-17 in the Final Office Action dated February 18, 2009. The appealed claims are set forth in the attached Claims Appendix.

1. Status of the Claims

Claims 1-17 have been rejected in the Final Office Action. The final rejection of claims 1-17 is being appealed.

2. Grounds of Rejection to be Reviewed on Appeal

I. Whether claims 1-2, 4-8, 10-14, and 17 are unpatentable under 35 U.S.C. § 103(a) over U.S. Patent No. 6,230,047 to McHugh (hereinafter "McHugh") in view of U.S. Patent No. 5,879,270 to Huish et al. (hereinafter "Huish").

II. Whether claim 3 is unpatentable under 35 U.S.C. § 103(a) over McHugh in view of Huish, further in view of U.S. Patent 6,736,759 to Stubbs et al. (hereinafter "Stubbs").

III. Whether claims 9, 15, and 16 are unpatentable over 35 U.S.C. § 103(a) over McHugh in view of Huish, further in view of U.S. Patent 5,986,200to Curtin (hereinafter "Curtin").

3. Argument

I. The Rejection of Claims 1-2, 4-8, 10-14, and 17 Under 35 U.S.C. § 103(a) Should Be Reversed.

A. The Examiner's Rejection

In the Final Office Action, the Examiner rejected claims 1-2, 4-8, 10-14, and 17 under 35 U.S.C. § 103(a) as unpatentable over McHugh in view of Huish. (See 2/18/09 Office Action, pp. 3-8.) The Examiner affirmed this rejection in the Examiner's Answer. (See 9/17/09 Examiner's Answer, p. 3-5).

B. McHugh And Huish Do Not Disclose Or Suggest A Processing Unit Configured To (1) Receive The Parameter From The Sensing Unit, (2) Receive A First And Second Target Parameter Value, (3) Select A First And Second Audio Signals Having A Respective Tempo Corresponding To The First And Second Target Parameter Values, As Recited In Claim 1.

McHugh discloses that a processor chip stores "a plurality of rhythm pattern data and the chip generates rhythm tracks from the plurality of rhythm pattern data." (See McHugh, col. 4, line 67 – col. 5, line 2). As McHugh makes abundantly clear, the tempo of the selected rhythm pattern will increase or decrease based on the user's heart rate. (See Id. at col. 5, lines 41-44). That is, the tempo of each rhythm pattern can be increased or decreased, so each rhythm pattern has a variable tempo value. McHugh, in the embodiments disclosed with reference to Figs. 2 and 3, includes a music playback device 60 that may be "a music memory chip." (See McHugh, col. 6, lines 47-48). The music from device 60 is mixed with the rhythm patterns and played back to the user. (See Id. at col. 6, lines 48-52).

The Examiner refers to McHugh's disclosure of playing a programmed rhythm at a desired heartbeat to meet the limitation of "a processing unit configured to…select a first and second audio signals having a respective tempo corresponding to the first and second target parameter values," as recited in claim 1. (See Examiner's Answer, p. 6). McHugh discloses that a programmed rhythm is "played at a desired, e.g., normal, heartbeat" to slow the user's heartbeat and "played at a desired, or preprogrammed level" to raise the user's heartbeat. (See McHugh, col. 5, l. 61-col. 6, l. 4). Appellants respectfully submit that it can easily be inferred that, by playing a programmed rhythm at a desired or preprogrammed level, the tempo of each rhythm pattern can be increased or decreased so that each rhythm pattern has a variable tempo value, as previously stated. In contrast, the processing unit of the claimed invention selects a specific audio signal that has a tempo which corresponds to the first target parameter and a second, different, audio signal that has a tempo which corresponds to the second target parameter. Playing a rhythm at a slower or faster tempo is not the same as selecting two distinct audio signals with different characteristics.

Furthermore, even if McHugh discloses selecting two different programmed rhythms, which Appellants do not admit, it is clear that these two rhythms are still manipulated. This is evidenced by the language used by McHugh when he states that the programmed rhythm is "played at a desired, or preprogrammed level." (See Id., col. 6, ll.

3-4). One of ordinary skill in the art would clearly understand this disclosure to mean that the programmed rhythm is manipulated to be played at the desired level.

Moreover, the music on device 60 could not be considered the "plurality of audio signals" of claim 1 because, as previously stated, claim 1 requires a processing unit to "select a first and second audio signals having a respective tempo corresponding to the first and second target parameter values." However, the music on device 60 is selected by the user based on desire, not on the tempo of the music. McHugh allows a user to select a desired rhythm pattern that is stored in the chip. (See McHugh, col. 5, lines 8-10). However, as described above, the McHugh device then generates the rhythm pattern with a tempo corresponding to the user's heart rate. McHugh does not select a rhythm pattern having a predetermined tempo, but rather takes the user input of the rhythm pattern selection and generates that rhythm pattern at any tempo. Because the music is mixed with the rhythm patterns, the user hears a tempo corresponding to heart rate, but it is not related to the music stored on device 60. Thus, this music could not be considered the "plurality of audio signals" of claim 1. Therefore, McHugh fails to disclose or suggest "a processing unit configured to (1) receive the parameter from the sensing unit, (2) receive a first and second target parameter value, (3) select a first and second audio signals having a respective tempo corresponding to the first and second target parameter values," as recited in claim 1.

Huish does not cure these deficiencies of McHugh because Huish is not concerned with the storage of audio signals. Accordingly, neither McHugh nor Huish, either alone or in combination, disclose or suggest a processing unit configured to (1) receive the parameter from the sensing unit, (2) receive a first and second target parameter value, (3) select a first and second audio signals having a respective tempo corresponding to the first and second target parameter values," as recited in claim 1. Because claims 2, 4-8, and 10-11 depend on and, therefore, contain all of the limitations of claim 1, it is respectfully submitted that these claims are allowable.

Claim 12 recites "selecting a first and second audio signal having respective tempos, corresponding to the first and second target parameter values." Thus, this claim is allowable for the same reasons described in this section as claim 1. Because claims 13-14 and 17 depend on and, therefore, contain all of the limitations of claim 12, it is respectfully submitted that these claims are allowable.

II. The Rejection of Claim 3 Under 35 U.S.C. § 103(a) Should Be Reversed.

A. The Examiner's Rejection

In the Final Office Action, the Examiner rejected claim 3 under 35 U.S.C. § 103(a) as unpatentable over McHugh in view of Huish and further in view of Stubbs. (See 2/18/09 Office Action, p. 8.) This rejection was restated in the Examiner's Answer. (See 9/17/09 Examiner's Answer, p. 4.)

B. McHugh, Huish And Stubbs Do Not Disclose Or Suggest A Memory To Store A Plurality Of Audio Signals, Each Having A Predetermined Tempo Value or (3) Select[ing] A First And Second Audio Signals Having A Respective Tempo Corresponding To The First And Second Target Parameter Values

Similar to Huish, Stubbs is not concerned with the storage of audio signals. Thus, Appellants respectfully submit that Stubbs fails to cure the deficiencies of McHugh and Huish described above with respect to claim 1. Because claim 3 depends on claim 1, it is respectfully submitted that claim 3 is allowable.

III. The Rejection of Claims 9, 15, and 16 Under 35 U.S.C. § 103(a) Should Be Reversed.

A. The Examiner's Rejection

In the Final Office Action, the Examiner rejected claims 9, 15, and 16 under 35 U.S.C. § 103(a) as unpatentable over McHugh in view of Huish and further in

view of Curtin. (See 2/18/09 Office Action, p. 9.) This rejection was restated in the Examiner's Answer. (See 9/17/09 Examiner's Answer, pp. 4-5.)

B. McHugh, Huish, And Curtin Do Not Disclose Or Suggest A Memory To Store A Plurality Of Audio Signals, Each Having A Predetermined Tempo Value or (3) Select[ing] A First And Second Audio Signals Having A Respective Tempo Corresponding To The First And Second Target Parameter Values

While Curtin does discuss the storage and playback of audio signals, it fails to cure the deficiencies of McHugh and Huish described above with respect to claims 1 and 12. Because claim 9 depends on claim 1, it is respectfully submitted that claim 9 is allowable. Because claims 15 and 16 depend on claim 12, it is respectfully submitted that these claims are allowable.

4. Conclusion

For the reasons set forth above, Appellants respectfully request that the Board reverse the rejection of the claims by the Examiner under 35 U.S.C. § 103(a), and indicate that claims 1-17 are allowable.

Respectfully submitted,

Date: November 10, 2009 By: _____

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CLAIMS APPENDIX

1. (Previously Presented) An audio interval training device, comprising:

a sensing unit to obtain a parameter of a user in physical exercise;

a memory to store a plurality of audio signals, each having a predetermined tempo value; and

a processing unit configured to (1) receive the parameter from the sensing unit, (2) receive a first and second target parameter value, (3) select a first and second audio signals having a respective tempo corresponding to the first and second target parameter values, (4) rendering the first audio signal to the user at least until the processor determines the parameter has achieved the first parameter value, (5) rendering the second audio signal to the user at least until the processor determines the parameter has achieved the second parameter value, and (6) alternating the rendering of the first and second audio signals according to (4) and (5).

2. (Previously Presented) The audio interval training device as claimed in claim 1, wherein the parameter is a pulse rate.

3. (Previously Presented) The audio interval training device as claimed in claim 1, wherein the parameter is a time-interval.

4. (Previously Presented) The audio interval training device as claimed in claim 1, wherein the tempo is a beat per minute value.

5. (Previously Presented) The audio interval training device as claimed in claim 1, wherein the sensing unit is a heart rate monitor or a timer device.

6. (Previously Presented) The audio interval training device as claimed in claim 5, wherein a respective audio signal is rendered to the user until the user's heart rate reaches the first or second target heart rate, as determined by the processing unit using a received heart rate from the heart rate monitor.

7. (Previously Presented) The audio interval training device as claimed in claim 1, wherein the sensing unit and the processing unit are connected in a wired or wireless way.

8. (Previously Presented) The audio interval training device as claimed in claim 1, wherein the first and second target parameter value include target parameter value selected by a user or a programmed exercise routine.

9. (Previously Presented) The audio interval training device as claimed in claim 1, wherein the audio signals are annotated with their beat per minute value.

10. (Previously Presented) The audio interval training device as claimed in claim 1, wherein the tempo values of the plurality of audio signal are determined either by the audio interval training device, or by an external device and transferred to the audio interval training device.

11. (Previously Presented) The audio interval training device as claimed in claim 1, wherein the audio signals are encoded in an MP3, WAV, MPEG-4, WMA or AAC format.

12. (Previously Presented) An audio interval training method, comprising steps of:

receiving a first and second target parameter value;

receiving a parameter of a user in physical exercise from a sensing unit ;

selecting a first and second audio signal having respective tempos, corresponding to the first and second target parameter values; and

alternatively rendering the first audio signal to the user at least until a processor determines the parameter has achieved the first parameter value and the second audio signal to the user at least until the processor determines the parameter has achieved the second parameter value.

13. (Previously Presented) The audio interval training method as claimed in claim 12, further comprising the step of, a user, selecting the first and second target parameter value

from a group of predetermined target parameter value or a programmed exercise routine that includes the first and second target parameter value.

14. (Previously Presented) The audio interval training method as claimed in claim 12, wherein the audio signals are encoded in an MP3, WAV, MPEG-4 or WMA format.

15. (Previously Presented) The audio interval training method as claimed in claim 12, further comprising the step of, selecting at least one of a further audio signal having respective tempos similar to the first and second audio signals.

16. (Previously Presented) The audio interval training method as claimed in claim 13, further comprising the step of, at a predetermined time, rendering at least one of a further audio signals in place of the first and second audio signals.

17. (Previously Presented) The audio interval training method as claimed in claim 12, wherein the parameter is a pulse rate or a time-interval.